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ABSTRACT

The extent of and attitudes toward competency-based assessment in Australia's technical and further education (TAFE) sector were examined in a five-phase study that included the following activities: preliminary literature review and structured interviews with individuals/groups selected for their expertise in training in public and private organizations and workplaces; case studies of grading competency-based assessments in the Australian defense organization, the accounting industry, the tourism/hospitality industry, a science laboratory technician course, and the electrical industry; and invitational seminar of assessment experts and policymakers from all sectors. The subject of this report is the practice of "grading" or assessing and reporting levels of performance in competency-based vocational education and training. The report examines the validity of the current practices and provides input to inform future policy formation at both the national and state levels.
Competency-based training (CBT) was being graded in all Australia's states and territories, albeit to widely varying extents. Within the TAFE sector, support for graded assessment was active, and policies and organizational support to facilitate development and implementation of competency-based assessment were in place. Many private training providers were also enthusiastic about grading in CBT. Although employers generally wanted off-the-job training providers to supply them with grades, they did not necessarily want grading in their own workplaces. A flexible system of competency-based assessment and coordination of grading policies/practices at the national level were advocated. (The bibliography lists 42 references. Appendixes constituting approximately 40% of this document contain the case studies, interview schedule, and lists of informants and acronyms.) (MN)

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The grade debate

PETER THOMSON
ROGER MATHERS
ROBERT QUIRK

Should we grade competency-based assessment?

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PETER THOMSON
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Should we grade competency-based assessment?

NCVER

Adelaide 1996

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Acknowledgements

This report had its genesis in discussions arising from a paper presented by one of the authors (Peter Thomson) at a TAFE senior executives' conference in October 1993. The paper drew attention to the urgent need for research to inform policy in the area of competency-based assessment. It was decided by NCVER's research manager at that time (David Lundberg) that one topic worthy of further investigation was the appropriateness of assessing and reporting levels of performance in competency-based training. David set up the project and work was under way when he departed from NCVER in April 1995. Hugh Guthrie took over as project manager for the next four months and enlisted the assistance of Roger Mathers to conduct an initial set of interviews and prepare an issues paper. Peter Thomson began work as research manager in August and also took over as principal researcher on this project. As well as building on the solid base of work already conducted by Roger, he received assistance from Robert Quirk of the Assessment Centre for Vocational Education in Sydney. Earlier in the year Robert had produced a review of literature on the issue of graded competency-based assessment. Section 3 of this report draws on Robert's work. Josie Misko was another NCVER colleague who assisted in the data collection by conducting a number of the case studies.

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Executive summary

The project

This report is one of a number of reports resulting from a major investigation into competency-based assessment procedures funded by the National Centre for Vocational Education Research (NCVER) during 1995. The subject of this report is the practice of 'grading', that is, assessing and reporting levels of performance in competency-based vocational education and training.

The aim of the research has been to investigate existing policies and practices. The report examines the validity of the current practices and provides input which it is hoped will inform future policy formulation at both national and State levels.

The extent of competency-based training and assessment

Although the adoption of a competency-based vocational education and training system in Australia has been official policy for six years, it is difficult to quantify the extent of competency-based training (CBT) implementation. Depending on how broadly or narrowly CBT is defined, a recent DEET-funded national survey reported implementation levels between approximately 80 per cent and 30 per cent in the TAFE sector.

Other research involving a national survey of TAFE colleges, indicates that only one-fifth of respondents believe there is a comprehensive application of competency-based assessment. (Comprehensive was defined as having 80 per cent or more of the colleges' courses using competency-based assessment.)

The extent of grading of competency-based assessment

Widely differing estimates of the extent of grading in CBT are given, although we do know that it occurs to varying degrees in all States and Territories. For example, within the TAFE sector there is active support for the option of graded assessment, with policies and organisational support to facilitate development and implementation. This is currently to be found in NSW TAFE, SA TAFE, the ACT Institute of Technology and several Victorian TAFE institutes. However grading is not part of WA TAFE policy and Tasmania and Queensland TAFE firmly believe that reporting levels of achievement in modules of training is inconsistent with the nationally-agreed principles which underlie competency-based training.

Many private providers in the States and Territories, in particular those catering for fee-paying students, are enthusiastic about grading: they believe their competitive edge comes from the range and quality of information they provide to their clients.

The extent of grading within enterprises proved to be a major contradiction of the study. While the demand of employers for grading was a frequently cited reason for its adoption by training providers, there were few examples of grading to be found in the workplace. Employers wanted the off-the-job training providers to supply them with grades but did not necessarily want grading in their own workplaces. Reasons that can be advanced to explain this seeming inconsistency include, lack of workplace resources, potential industrial relations problems and the views of some employers that skills beyond those sufficient to get the job done do not necessarily lead to better job performance.

On the other hand, employers value grading of off-the-job performance because it provides a different type of information and is one step removed from workplace and productivity considerations.

An exception to the general approach of employers towards grading in the workplace is to be found in the supervisory and managerial positions (i.e. the higher ASF levels). Here a special type of grading within a broader management by objectives or performance appraisal system is used.

The purposes and advantages of graded competency-based assessment

The major claims of the advocates of graded competency-based assessment are that it:

- motivates students/trainees to achieve higher performance in knowledge and skill areas;
- rewards excellence;
- provides information which assists in decisions about:
  - selection
  - course credits
  - promotion;
- provides information that improves the level of confidence in the assessment process;
- provides information about the amount and quality of learning achieved.

The arguments against graded competency-based assessment

There was concern at the national level and within some States and Territories that developments in grading were premature, inappropriate and went against the principles underlying the Australian CBT system, specifically those expressed within the National Framework for the Recognition of Training (NFROT).

However, other views exist and some nationally accredited curricula already allow for the use of grades beyond 'competent'.

Many of those opposed to graded assessment see its adoption as the thin edge of the wedge. They believe it creates a competitive learning environment in which the grades are used to compare students with one another, rather than against a standard, a familiar debate to educators and one which hinges on views about how learning takes place.

The use and form of grades on and off the job

There is a general consensus among the advocates of grading that it is not always necessary. As we have already noted, there is relatively little grading applied in the workplace. This is particularly true of training at the entry levels of employment (ASF levels 1 and 2).

It is away from the workplace in TAFE and private provider courses at ASF levels 3 to 6 where grading is widely used. However the form of grading varies.

Different States and Territories have approached the issue with a variety of assumptions and applied different techniques. Both the terms and the number of grades used vary.

If, as the opponents argue, competency standards statements do not allow for grading, then a means of creating grades must be found outside the national competency standards of the Standards and Curriculum Council (SCC). This has been achieved by, in effect, divorcing off-the-job training from workplace competence. The prevailing view of off-the-job providers regarding competency-based assessment is that they cannot and should not have the responsibility for making judgements about workplace performance, the only exceptions being where it was possible to attain workplace competence in a training college environment.

For the most part the grading we are discussing in this report is concerned with performance off the job and it cannot necessarily be equated with workplace performance.

The approach to grading adopted by off-the-job providers is to devise criteria for additional levels of achievement, based on the existing learning outcomes. Examples range from relatively straight-forward criteria such as 'number of attempts' and 'consistency' to more complex ones like 'efficiency', 'initiative' and 'creativity'.

Public and private providers always acknowledge that their training program is based on the industry competency standards (where these exist) but may consider that their program goes beyond these standards in some way.

Conclusions and future directions

At the present time in Australia there is a lack of agreement on whether graded competency-based assessment conforms with the national framework of CBT. An absence of national co-ordination has resulted in the State and Territory TAFE systems and private training providers' determining their positions based on individual interpretations of underlying principles.

Where grading is being implemented in Australia there appears to be a range of assessment approaches and assumptions operating. Of particular concern is the quality of the assessment instruments currently being used to arrive at grades. There is a need to develop assessment exemplars to encourage improvement in existing procedures.

However, the primary concerns are associated with policy clarification, particularly in relation to the national framework of vocational education and training. But any policy change on grading needs to be based upon sound research and our work in this project suggests the alternative approaches need to be evaluated in a range of contexts. In particular, a much closer look needs to be taken at the usefulness of grading in the workplace.

It is a challenging piece of research, but fundamental to a decision on grading competency-based assessments. Meanwhile, the following principles should be endorsed while the evidence is gathered.

- A flexible system of competency-based assessment is preferable to an inflexible one.
- The greater the variety of information obtained when making an assessment the better *(although there comes a point when adding information ceases to have much impact on the assessment decision).*
- Current pilot studies in the use of graded competency-based assessment should be encouraged, provided they are thoroughly evaluated and the results reported. *(Guidance will be needed on ensuring a clear definition of the studies and in the framing of the evaluation questions.)*

There exists a danger that a central authority may adopt a rigid stand which insists on a consistent approach—that is, everybody must grade or not grade. It will be important to look closely at the consequences of either of these positions. Undoubtedly the preferable way to proceed is to gather more evidence to determine the best course. Making a decision to defer attempts to achieve national consistency in assessment practice is a price we should be prepared to pay to reach this end.

1 Introduction

The National Centre for Vocational Education Research (NCVER) funded a major investigation into competency-based assessment procedures during 1995. The outcome of the project has been the publication of three reports on different aspects of competency-based assessment, namely:

- assigning grades for performance
- selecting applicants into programs
- recognising prior learning.

Two of these issues will be dealt with in later publications.

This report examines the assigning of grades for performance in vocational education and training (VET) programs. The process is commonly referred to as 'grading' and is one of the most contentious issues in the transition to a competency-based approach to education and training. Reference to 'grades' or 'grading' suggests a return to what some people regard as the predominantly norm-referenced assessment system in use in the VET sector before the decision to adopt competency-based training (CBT) nationally.

By definition, competency-based assessment does not include the concept of grading. And although there is a national commitment to competency-based assessment, there is no policy commitment to grading. Grading however, does take place within competency-based assessment in Australia but is not applied in any consistent manner. For example, there are variations in the policy positions of the different TAFE authorities. To some extent these reflect different perspectives on the assumptions underlying CBT as well as the demands from students, industry and universities for additional assessment information.

Industry training managers indicate that, in general, grading practices are not common in company training programs. Industry tends to use the benchmark of 'competent' or similar. Interviews with representatives of industry training advisory bodies (ITABs) confirm this approach to grading in industry. However, in the current grading debate some ITABs consider moves in this direction totally inappropriate, while others promote it.

A further complication is that adoption of an ungraded 'competent/not yet competent' reporting mechanism does not, of itself, ensure that either the course or the assessment procedures are competency-based.

The main aim of the research has been to investigate the existing policies and practices that have led to confusion in competency-based assessment. A major intention of the researchers has been to examine the validity of the current practices and provide additional information which will, it is hoped, inform future policy formulation at both a national and State level.

2 Methodology

Definition

Despite the best intentions of the architects of Australia's competency-based training and assessment system, there is no universal agreement on the meaning of many of the technical terms. Smith and Perry (1995) reporting on their national survey of CBT, point out that

> *. . . written definitions appear to some extent to be left behind by the continual debate about CBT and the resultant variations in practice* (p.1)

This report describes the practice of assessing and reporting *levels* of performance in Australia's system of competency-based vocational education and training which is generally used to recognise merit or excellence. It has come to be known by the short-hand terms 'grading' or 'graded assessment'. Throughout the report we will, for the most part, use the term 'grading' to include all that is implied by these assessing and reporting practices.

The research method

The research was conducted in five phases although the order of some elements was occasionally varied to suit the circumstances. For example, information on the development of new policies and practices related to grading continued to turn up over the length of the project, which necessitated a periodic updating of the information obtained in the earlier phases.

The five phases covered the following activities.

- The project began with a preliminary review of the relevant literature and a series of structured interviews in the States and Territories. Interviews were undertaken both face-to-face and by telephone and involved individuals and groups. Interviewees were chosen on the basis of their expertise and because they reflected an appropriate range of sectors, fields, interests and perspectives.

  The interviews investigated the relationships between policy and practice and sought to identify the range of practices used, taking into consideration the complex factors which underlie policy development related to grading and its implementation. Policy and practices were examined in both

public and private training organisations as well as individual workplaces.

- This phase involved undertaking case studies of current practices in grading competency-based assessments. The case studies drew on practices in the Australian Capital Territory, New South Wales, Queensland, South Australia and Victoria.
- An issues paper and a number of short draft reports were prepared which described practices and policy implications related to grading.
- In October 1995 an invitational seminar of assessment experts and policy makers from all sectors covered by the work was held in Sydney.

  The timing of the expert seminar coincided with the completion of the issues paper and much of the field work, but was prior to the analysis of the field work and the commencement of report writing.

  The seminar provided the researchers with:
  - broad feedback on the research findings to that point in time;
  - implications of various aspects of the research that was reported;
  - additional information sources and new leads.
- Following the completion of additional work resulting from the seminar, the final report was prepared.

3 The issues associated with grading

Competency-based assessment in Australia

Introduction

Much of the discussion of assessment in competency-based education and training assumes that assessment should be 'criterion-referenced' and not 'norm-referenced'. Subsequently, the discussion usually turns to the question of whether levels of merit or grades have a place in criterion-referenced assessment.

A criterion-referenced assessment is one that is deliberately constructed to yield measurements that are directly interpretable in terms of specified performance standards (Glaser & Nitko 1971). Criterion-referenced assessments are therefore not designed to make comparisons between individuals—this is the role of norm-referenced assessments like the Year 12 examinations. Rather, criterion-referenced assessments help make decisions about an individual's performance relative to a specified set of tasks such as meeting the safety requirements of a job.

Competency-based assessment is a particular type of criterion-referenced assessment. The performance standards in this case are either the competency standards statements set by industry, or the learning outcomes of the training programs (which are usually based on industry standards).

The April 1989 meeting of Commonwealth, State and Territory ministers for vocational education, employment and training made a commitment to work towards a competency-based training system. The meeting also endorsed the establishment of the National Training Board (NTB), the functions of which have been subsumed by the Standards and Curriculum Council (SCC).

The ministers subsequently endorsed a National Framework on the Recognition of Training (NFROT), which was implemented in August 1992. State and Territory recognition authorities have agreed on minimum requirements to ensure national consistency in the interpretation of the principles. As at July 1994, the minimum requirements specified for the principle 'Appropriate Assessment' in courses accredited under NFROT were that 'assessment of learning outcomes to the required standard of performance is consistent with the achievement of the competency standards on which the course is based', and that

'assessment methods are valid, reliable, flexible and fair'. (ACTRAC, 1994, Section 5)

The problem of assessing workplace competency

Although our vocational education and training system aims to provide the knowledge, skills and attitudes required in employment, the extent to which this happens varies greatly. Programs like apprenticeships and traineeships are combinations of workplace experience and formal off-job instruction. In these programs TAFE institutions are the most common providers of the off-the-job component of instruction. However TAFE institutions and private providers of training offer many other programs which aim to prepare students for employment, but which do not include any workplace experience. The area of business studies is a good example.

The role of training providers in delivering workplace competency, irrespective of the amount of workplace experience available, has been under increasing scrutiny in recent years (Johnstone 1993; Sheldrake 1993; Watson 1993; Steenholdt 1994). The question of whether off-the-job teachers and trainers should have the responsibility for making judgements about workplace performance has led to a number of policy initiatives. For example, a working party report in Western Australia states:

> *Competence, measured against a standard, can only be assessed in the workplace. The gaining of a credential or qualification from a learning institution only gives the inference [implies] that the recipient will be competent on the job.*
>
> (WA Department of Training 1994)

When discussing South Australian policy, Wood (1995) notes that there is confusion in TAFE across Australia because of the use of the assessment term *competency achieved* in off-the-job training programs. This has led to a policy change in South Australia where the term will no longer be used to report module outcomes. Instead, performance will be related to the course modules and reported in terms of achieving a *pass* (plus grades where applicable). A similar move has been made in New South Wales where assessment is specifically set against curriculum outcomes.18

> *TAFE NSW will not be assessing students directly against competency standards. Assessment of performance in relation to competency standards is a matter for the industrial parties in the workplace.*
>
> (NSW TAFE Commission 1994)

Where learners do not have access to substantial workplace experience, the role of the provider is to equip them with the knowledge, skills and attitudes that will prepare them to obtain and commence work and to learn efficiently from that work

claiming that the outcomes of their training programs are people who are 'work ready' not 'work competent'.

How widespread is competency-based assessment?

The amount of competency-based assessment taking place is clearly dependent upon the extent of competency-based education and training, which unfortunately is difficult to quantify. Estimates made in a 1994 national survey suggest the figure for TAFE is between 80 per cent and 30 per cent depending on how broadly or narrowly CBT is defined (Smith et al. in press). The 80 per cent figure corresponded to courses which were based on NTB competency standards or were developed with formal industry consultation and endorsement.

Although a course might be defined as competency-based, it does not necessarily follow that assessment of the course will itself be competency-based, a situation which is due to the evolving nature of VET in Australia. In the early days of policy implementation most resources were directed towards the development of standards and training programs. Only recently have there been moves to address assessment issues in any meaningful way. Therefore, it is not surprising when Lundberg (in press) reports that a national survey of TAFE colleges indicates that only one-fifth of respondents believe there is a comprehensive application of competency-based assessment in their college. (*Comprehensive* was defined as having 80 per cent or more of the colleges' courses using competency-based assessment.)

The picture in industry is less encouraging: here competency-based assessment would appear to be even less used. In a recent survey of Australian workplaces involving managers, supervisors, training officers, workplace assessors and organisers, industrial officers and executives in unions, Misko and Saunders (1995) found few employers and industries were using competency-based assessment. The majority either used formal or informal appraisal processes based on supervisors' or managers' observations of performance, or had no assessment processes in place at all. It was found however, that employers were more likely to be using competency-based assessment where industry standards were already established.

Therefore it follows that, for the most part, the assessments discussed in this paper are concerned with performance off the job.

How widespread is the use of graded competency-based assessment in Australia?

As we move from the more general to more specific statistics, the less reliable figures relating to this area appear to be. Smith et al. (in press) and Lundberg (in press) give widely different estimates of the extent of grading. Smith et al's results show a significant level of graded competency-based assessment in place in TAFE courses in all States and Territories. Their national figure for TAFE CBT courses (using the least demanding definition of CBT) shows grading in around 60 per cent of cases. The figure for non-TAFE providers is less than ten per cent. Lundberg's figures, based on a national survey of TAFE directors and campus managers (55 per cent response rate) suggest grading is being used in only 30 per cent of TAFE colleges. However, regardless of what the true extent of grading is, we do know that it occurs to varying degrees in all States and Territories.

On the other hand, the extent of grading within enterprises presents us with a major contradiction. While the demand of employers for grading is a frequently cited reason for its adoption by training providers, there are few examples of grading to be found in the workplace. Employers want off-the-job training providers to supply them with grades but did not necessarily want grading in their own workplaces. The reasons for this are discussed in Section 5. Employers and unions appear to support the use of a 'competent/not (yet) competent' judgement. The established industrial relations consultation processes which apply in a number of industries indicate that employees also support this form of reporting of their performance.

An exception to employers' inconsistent attitude towards grading is to be found in the supervisory and managerial positions. Here a different type of grading, within a broader management by objectives or performance appraisal system is used.

An outline of the debate over grading

Some overseas background

The historical origins of the preference for a 'single cut-off' in assessment in competency-based education and training are explored by Alison Wolf (1993). She traces it to the close link that developed in the United States between criterion-referenced testing, as it grew in popularity, and 'mastery learning', an educational movement aimed to improve the achievement level of a class of students as a whole.

In the United States, competency-based vocational education and training tended to be based on criterion-referenced assessment and 'mastery learning' with the standard for 'master' set at a high level for each task. According to Blank (1982), this ensures that most students will attain a high level of proficiency in the

task. This in turn will ensure a sound foundation for the learning and mastery of subsequent tasks since mastery of each successive task is required for progression through the training program. The competence of those who complete the program is therefore assured. Furthermore, he argues that achievement of a standard of performance beyond that specified for mastery of a task constitutes achievement on a more advanced task, not superior achievement on the same task.

Wolf (1993) is opposed to this mastery-based view as she contends that the standards set in 'mastery' programs tend to be not only minimum, but also maximum, levels of achievement:

> *. . . teachers teach to them, but no further, which depresses the achievement of the more able or harder working students. Many of the more recent US tests therefore use several cut-offs, with the key ones representing 'minimum competence', and a much higher 'mastery' level.* (p.23)

On the other hand, Wolf (1993) does not believe that the introduction of more than one 'cut-off' point requires the documentation of a set of detailed performance criteria for each 'cut-off' point. She cites evidence of the failure of increasing comprehensiveness of criteria to produce a more workable system in the UK.

Where assessment is to be given in grades, she argues that, while some specification of outcomes and assessment criteria for each grade may be appropriate, it should avoid becoming lengthy, highly specific and constraining.

> *. . . people actually operate with complex holistic models of performance, in which they compensate and weight without being conscious of how and when they are doing so.* (Wolf 1993, p.27)

Wolf regards the number of grades or marks awarded on any given assessment, the way aggregation is done, the preconditions, or the amount of compensation allowed for an overall grade as 'essentially practical decisions'.

The Australian debate

In its consideration of the question of grading, the working group on excellence and expertise of the Assessment Steering Group, CBT Working Party (1993) suggested that moves to introduce a graded competency-based assessment system could be premature when a criterion-based assessment system is still in the process of implementation.

The NFROT accreditation principles can be interpreted as supporting the reporting of performance only in terms of competence achieved or not achieved. One principle states that:

All courses must focus on competencies. Courses must include any national competencies endorsed by the National Training Board, where they exist (VEET-AC n.d.).

As any particular national competency standard defines only one level of performance, it can be argued that only one standard applies to the assessment and reporting of performance. In other words, competency standards do not allow for levels, one is either 'competent' or 'not competent'.

However, other views exist and some nationally accredited curricula, such as accounting, already allow for the use of grades beyond competent. Furthermore, the use of grades other than pass/fail has been given a qualified endorsement by the NTB (Rutherford 1994).

Many of those opposed to graded assessment see its adoption as the thin edge of the wedge. They believe it creates a competitive learning environment in which grades are used to compare students with one another rather than against a standard. One response to this argument is to point out that the standard does, in fact, represent 'another person'. Standards relate to expectations of competence in the workplace and are written descriptions of what a competent worker can do. When we say somebody has met the standard, we are actually making a decision which indirectly compares that person with another (the competent worker).

Hager et al. (1994) find that some opponents argue that graded assessment:

- encourages competition rather than co-operation in learning; and
- will inevitably lead to a feeling of failure amongst those that receive low grades (which would adversely affect learning).

There is also a view that grading leads to greater teaching effort being directed towards the more able students (Assessment Steering Group, CBT Working Party, 1993).

These are familiar criticisms to educators as they hinge on views about how learning occurs. Those who believe that learning is most effective in a co-operative environment reject the need for graded assessments. They cite evidence of the ways in which the competitive climate in schools adversely affects learning. The problems created by competition and the inevitable sense of failure it produces in some students can be of particular significance in vocational education. Many so-called failures from the school system come to vocational education and training as mature adults with a very negative opinion of the system—in particular, of assessment. Teachers and trainers need to provide these mature learners with a program that does not reinforce their earlier experiences. An assessment report in a form such as

'achieved/not yet achieved' or 'pass/fail' is seen to be more appropriate for such learners.

Arguments for and against grading flourish and as Hager et al. (1994) note:

> *There has been an unfortunate tendency for the debate about grading to become polarised; people tend either to be vigorously in favour of grading or implacably opposed to it. This polarisation is unfortunate because it is possible to be both in favour of grading and opposed to it,* ***depending on the circumstances.*** (p.87)

If a provider's general assessment policy makes grading an option, a decision about whether or not to grade assessments in particular cases would have to be justified by identifying the additional benefits that would result. Hager and his co-authors also address the purposes underlying the use of grades. These include factors such as:

- need to provide more comprehensive information
- motivational impact
- effect on learning
- impact on validity and reliability estimates
- pressure from commerce and industry
- higher education requirements for articulation, advanced standing or competitive entry. (p.85–86)

It is also possible to consider the purposes for which grading is used from the perspective of the users or advocates. The relationships are shown on the following table.

The table shows the views of those who advocate and use grading. It is important to appreciate that the case against grading has been put equally forcefully by other members of each of these interest groups.

Purposes of grades	Major advocate/user group
Motivates students/trainees to achieve higher performance in knowledge and skill and also rewards excellence	• teachers/trainers • employers • students/trainees
Provides information which assists in decisions about: • selection • course credits • promotion	• tertiary institutions (especially universities) • employers
Provides information that improves the level of confidence in the assessment process	• teachers/trainers
Provides information about the amount and quality of learning achieved	• students/trainees • teachers/trainers • employers/community groups

Issues related to the implementation of grading

Approaches

Peddie (1995) categorises approaches to graded assessment according to the closeness of the relationship to the learning outcomes of a module or course.

Approaches which are *based on or closely related* to the specified learning outcomes include:

- achieving the outcomes at a higher level
- speed of performance
- consistency of performance.

Approaches which are based on factors *independent* of the learning outcomes include:

- transfer of skills to new situations
- achievement of additional learning outcomes
- originality, creativity, 'flair'
- outstanding attitudes, approach to learning, motivation.

Wilmut and Macintosh (1994) argue that the approach to grading criterion-referenced assessment depends on what is being assessed. In their view, assessment of narrow task skills may be reportable only as 'pass or not pass, or can do or cannot do', rather than in terms of degrees of merit or levels of achievement. They suggest that it is only when assessment is of more general attributes, and when it is possible to take a more continuous view of competence, that it will be possible to 'determine attributes which characterise performance which goes beyond that required simply to pass, and which would be recognised as meriting greater recognition'.

The literature makes it clear that the use of grading in competency-based assessment needs to be approached with great care. In summing up the case for grading Peddie (1995) notes:

> *There are no simple, universal solutions to the issue of identifying merit or excellence in a competency-based program. Not only is this true in terms of assessment theory, but it is also true in terms of practical considerations, and cultural (and probably other) perceptions and beliefs.*
>
> *Equally important, there is no one approach that will always be best for every unit of learning in a competency-based program. This does not mean that the use of merit standards should* ***necessarily*** *be avoided* (p.196–197).

Of all the above approaches, the one most frequently mentioned in the literature is the achievement of learning outcomes at a 'higher level'. The amount of supervision required for the student could be used with some learning outcomes as a criterion to differentiate levels for a particular outcome. A

student who performs with 'little supervision' is obviously achieving at a higher level if the requirement of the learning outcomes specifies 'close supervision'.

In some courses 'higher level' involves the performance meeting more complex qualitative differences. Examples of the use of these more complex qualitative differences are discussed in section 4. The demand for grading is likely to be especially strong in higher ASF level courses where grading will depend on judgements about qualitative difference in achievement of complex learning outcomes.

Hager et al. (1994) are concerned that grading on additional learning outcomes could be based merely on 'diligence' rather than on the achievement of higher quality. Woodrow (1994) considers that grading on extra work would allow the demonstration of more advanced skills and aptitudes and could facilitate students pursuing their areas of interest. She also acknowledges that if project work were the basis for merit grades, assessment could be time-consuming, costly and subjective. Furthermore, she suggests that such work could be invalid if reliable authorship were difficult to establish. Project work could also encroach on class time required for the teaching of essential outcomes.

A better option, in relation to grading achievement in a whole course, may be to use a project which would necessitate the learner demonstrating an integrated understanding and application of knowledge and skills learned across the course, and which would be assessed and graded holistically (Byrne 1993).

The time taken to master specified learning outcomes has also been considered by a number of writers as a basis for grading. It is favoured by Blank (1982) on the grounds that slow learning is associated with unproductive behaviour, and that promoting productive behaviour by rewarding speed in learning with a grade promotes the competence of the trainee. To Hager et al. (1994), however, such an approach is both at odds with an outcomes-based system (which should not take the history of learning into account) and too simplistic to be used widely as a measure of merit. Peddie (1995) also notes that

> *. . . speed is bound up with western notions of merit and excellence, but is not a necessary part of such concepts in Maori society, or in some other cultures within New Zealand.* (p.188)

Few employers would share this view of what is meant by an outcomes-based system. It is a good example of the divide between achieving the learning outcomes of a course and the notion of workplace competence. To be competent in the workplace usually involves doing things within time limits.

Woodrow (1994) identifies use of safety procedures, efficient use of class time, punctuality, ability to follow instructions, ability to work with others, care of equipment/tools and college buildings, pride in workmanship and attendance, as additional bases for grading, a list similar to reports from colleges to employers about their apprentices and independent of reports on the learning outcomes of a course. As factors to be included in the basis for grading, some have the disadvantages of requiring considerable subjective judgement on the part of the teaching staff.

There are clearly a multitude of bases useful for grading. The task of those who grade is to be sure they have selected the appropriate base. The differences between what is appropriate for the classroom and for a workplace are important starting points for any work on grading.

Wolf (1993) suggests that the number of cut-off points or grades used should depend on the inherent logic of the subject (whether there are key, recognisable thresholds), and the use to which grades will be put.

Gonczi et al. (1994), in a study related to communication in the legal profession, found 'grading' to three categories of performance using holistic assessment criteria was done reasonably effectively, suggesting that experienced practitioners have clear tacit models of professional performance. Wolf, while agreeing with the use of holistic approaches, suggests that assessors have difficulty grading particular instances of performance in this way. This is an issue which deserves fuller examination.

Moreover, the level at which grading should occur is another issue for clarification. As Clayton (1995) notes, a blanket approach across all levels of performance might be quite inappropriate. Providing learners with foundation skills usually requires no more than acknowledgement of successful completion of the learning outcomes.

Strong (1995), when considering the alternative approaches, suggests any decision to grade must:

- take into account the principles of competency-based assessment
- accommodate the full range of requirements across course levels
- be educationally sound
- be easily understood and administered
- produce results that are reasonably self-explanatory
- be cost-effective.

Much of the discussion of assessment in competency-based education and training affirms that assessment should be 'criterion-referenced' and not 'norm-referenced'. As both Peddie

(1993) and McGaw (1993) indicate, however, this distinction can be made too sharply. The setting of standards used in conjunction with criterion-referenced tests may be strongly influenced by normative judgements about the relative difficulty different individuals in a group will experience in achieving a standard. Criterion-referencing and norm-referencing can be considered as sites along a continuum. In reality, 'purely' norm-referenced or 'purely' criterion-referenced assessment does not exist: rather, a given test might be considered to be more towards the criterion-referenced end of the continuum, but still capable of yielding norm-referenced information (Hambleton and Rogers 1991; Nitko 1984).

Technical issues

Some technical assessment issues related to the assignment of a grade have also been identified. The NSW TAFE Commission (1994) has highlighted a number of possible ways for calculating grades for modules and courses. For example:

Options for grading *modules* include:

- inference based on professional judgement with reference to module purpose
- standard procedures for combining graded results within module
- totalling and/or averaging marks.

Options for grading *courses* include:

- results from all modules may be combined to determine overall result
- results from selected modules may be combined to determine overall result
- average marks of modules contributing to award
- standard procedures for combining graded module results within course
- major piece of work assessing integrated outcomes of course.

Each of these options raises significant issues. There is, for example, a problem with averaging grades. As Wolf (1993) points out, averaging assessment information necessarily introduces a degree of ambiguity about the underlying performance. It is necessary for assessors to understand the technical issues involved if their judgements are to have validity.

* * *

The policy and procedures associated with graded competency-based assessment need to be considered in two contexts—of training providers and industry. This review deals largely with

the first of these, mainly because so little is known about the second.

In a competency-based system of education, criterion-referenced information about whether or not a learner has achieved the outcomes specified for a 'pass' is of fundamental importance. Whether the learning outcomes of a competency-based curriculum involve the achievement of 'workplace competence', 'workplace readiness' or a different kind of outcome, the principles of competency-based education and training require the assessment report to make clear whether or not a learner has 'passed' or 'achieved' the learning outcomes.

The proponents of grading also argue that it is desirable to design assessment procedures to report on the learner's achievement of some degree of merit in a module or course. Offering the option of graded assessment essentially becomes a policy decision informed by educational considerations, client expectations, technical assessment considerations and other factors.

What we presently know about the value of grading from the training provider perspective is that all shades of opinion flourish. What can or should be done in the future must await the results of further research into existing practices.

4 Research findings

The extent of competency-based assessment and grading in Australia

Although the adoption a competency-based vocational education and training system in Australia has been official policy for six years, it is difficult to quantify the extent of CBT implementation. This is partly attributable to the fact that CBT still means different things to different people. Depending on how broadly or narrowly CBT is defined, a recent DEET-funded national survey (Smith et al. in press) gave (approximate) figures of implementation levels between 30 per cent and 80 per cent in the public or TAFE sector.

The amount of competency-based assessment taking place is even more difficult to quantify. Those who question how competency-based training can exist without competency-based assessment need to appreciate the evolving nature of VET in Australia. In the early days of policy implementation most resources were directed towards the development of standards and training programs. Only recently have there been moves to address assessment issues in any meaningful way. Therefore, Lundberg's findings, of a far-from-comprehensive take up of competency-based assessment in TAFE colleges, noted in section 3, are not surprising.

In the context of grading within CBT, section 3 also noted that opinion varies on the extent of grading although it is known that it takes place in all States and Territories. For example, within the TAFE sector there is active support for the option of graded assessment, with policies and organisational support to facilitate development and implementation to be found in NSW TAFE, SA TAFE, the ACT Institute of Technology and several Victorian TAFE institutes are currently making this option available. On the other hand, Tasmania and Queensland TAFE firmly believe that reporting levels of achievement in modules of training is inconsistent with the nationally agreed principles underlying competency-based training. While Queensland TAFE rejects the grading of modules it is nevertheless exploring the use of an integrated end-of-course project which will enable an overall criterion-referenced level of achievement to be reported. This integrated assessment will be available to students who are assessed as 'competent' against a full set of learning outcomes. WA TAFE policy does not include grading; however, a recent Department of Training report on CBT assessment recommends that a grade should be recorded 'where this is appropriate'.

Many private providers within the States and Territories, in particular those catering for fee-paying students, are enthusiastic about grading since they believe their competitive edge comes from the range and quality of information provided to their clients. Therefore they have no hesitation in embracing graded performance when they see this to be a client's requirement.

While employer demand for grading was a frequently cited reason for its adoption by training providers, there were few examples of grading to be found in the workplace. The reasons for this are discussed in section 5.

The demand for grading

The employers' inconsistent position on the issue has prompted a number of those opposed to grading to question whether there is, in fact, a general demand for grading.

Section 3 of the report has already dealt to a large extent with the arguments for and against the use of grades in competency-based assessment, including the issue of demand. However, two recent pieces of research not covered in that section, have surveyed some user opinions related to grading. Quirk's (1995) study was based in NSW and involved questionnaire and interview responses. The major respondent groups were:

- TAFE Training Commission divisions
- NSW industry training advisory bodies
- TAFE teachers (from a single NSW institute)
- 'Other industry respondents' (from companies and commonwealth agencies)
- Other providers of training and related agencies.

In all, over 200 participants were involved.

The second study by Slatter (1994) canvassed opinions from staff and students using the national accounting modules in TAFE campuses in South Australia. Responses were obtained from 53 staff and 288 students.

Results of the NSW work which are most pertinent to the 'demand' issue were:

- in all groups except industry there was widespread support for assessing levels of achievement (i.e. grading) in competency-based education. (Industry support tended to be confined to particular industries.);
- there was clear support for the option of grading to be available in some courses with an overall preference for three levels (for example, pass, credit, distinction);

- the great majority of the TAFE teacher group believed availability of grading could make the course more attractive to prospective students;
- the great majority of TAFE teachers also believed the availability of grading could benefit the teaching/learning process. 'This was either the dominant or unanimous view of respondents in all fields of study' (pp.42-55).

The SA accounting survey looked at both student and teacher opinion. Students and teachers showed remarkably similar preference for particular gradings.

	Preferred grading method		
	Single 'pass' grade • competency achieved	Two pass grades • competency achieved • competency achieved with merit	Four pass grades • distinction • credit • high pass • low pass
Students n = 288	16.4%	26.6%	56.2%
Teachers n = 53	17.3%	25.0%	57.0%

(Adapted from Slatter, 1994)

Where there was no grade option available, students nominated this as the thing they liked least about competency-based training (43 of 113 responses).

Furthermore, a number of universities around the country claim that they require grades when considering achievements in TAFE courses in order to facilitate entry and/or credit for TAFE students. However, in Queensland, alternative selection processes have been established by universities, enabling TAFE students to transfer using results from non-graded TAFE courses. Similarly, Victoria's Swinburne University of Technology has determined that TAFE graduates of a non-graded associate diploma in aerospace who wish to transfer to the university degree are all 'competent' in the subject area. In this case, however, because places in the degree course are limited, additional selection processes have been established by the university to choose from the group of 'competent' students. When quotas are applied in this way, it is easy to see an argument for grading the TAFE results.

Furthermore, non-graded assessment needs to be as effective as graded assessment in improving the access of TAFE and private provider students to higher education.

In a recent discussion paper, Groves and Carruthers (1994) note that ungraded competency-based assessment may present a major barrier to pathways from TAFE to higher education in Victoria. They conclude their paper by proposing:

> *. . . that a method for incorporating grading into CBT assessment, at least in the final modules of courses (ASF levels 4–6) ought to be considered . . . opportunities for TAFE students to undertake university study in Victoria are still limited by current structural arrangements.* (p.7)

A set of industry perspectives

Consultations with executive officers of national ITABs (for example, Community Services, Metals and Engineering, National Office Skills Formation Advisory Body) revealed that many believed that the move by TAFE into grading was premature and that alternative ways of reporting merit or excellence had not been given adequate consideration. Officers from other ITABs (for example, Tourism and Hospitality and Electrical and Electronics) had a more positive attitude towards grading and were undertaking pilot schemes in their own areas. However, as the case study of Electrical and Electronics shows (Case study 5), grading was confined to the theoretical components of the course.

Other industry informants drew attention to the usefulness of grades when selecting students or trainees for industry-wide or company-based prizes or awards. Employers and industrial professional associations have traditionally used the marks or grades given by training providers for this purpose, since the independence of the assessment given by the provider is seen to be important. However, some industry representatives argued that, in the case of traineeships and apprenticeships, employers are well placed to make rankings based on workplace performance and should not need to rely on grades or marks of an external training provider.

Again, within industry, there is a diversity of views on who should decide whether or not to grade. Some industry members and national ITAB executives consider the national ITAB system should determine the positions of the employers and unions on the matter. They see it as an issue that should be considered in the context of national policy. This point of view however, conflicts with the views of some TAFE systems which consider the needs and demands of local employers, higher education institutions and the students themselves to be more relevant.

The use and forms of grades

There is a general consensus among the advocates of grading that it is not always necessary. For example, certain workplace skills, such as wearing safety glasses when using a lathe, do not lend themselves to grading. Indeed, as we have already noted, there is relatively little grading applied in the workplace. This is particularly true of training at the entry levels of employment (ASF levels 1 and 2) where the demand for grading is not so strong. This is true of both TAFE and workplace assessment.

Grading is widely used away from the workplace, in TAFE and private training courses at ASF levels 3 to 6. However, the form of grading varies.

Public and private providers always acknowledge that their training program is based on the industry competency standards (where these exist) but where grading is used, they claim that the program goes beyond these standards.

The different States and Territories vary the terms used to describe grades and also the number of grades used. Some use 'pass' instead of 'competent'. For example, there are:

- first division 'passes', second division 'passes', 'credits' and 'distinctions'
- 'competent', 'merit' and 'distinction'
- 'pass' and 'pass with merit'
- 'A', 'B' and 'C'.

Grading criteria: Findings from the case studies

The following table summarises the types of criteria and indicators used to create grades in the five case studies (pp.? to 48). The data presented in the table should not simply be seen as a set of individual items which can be used for determining merit or excellence. Furthermore, when judgements are made about performance, these cannot be isolated from the context of the performance.

Holistic qualitative judgements

The argument from a number of those involved in the case studies is that the assignment of grades requires them to make holistic judgements. These judgements are not confined to quantitative data but also cover qualitative information about what students and trainees do and say and how they interact with one another. All of the judgements are made in the context of the program.

Types of grading criteria: A summary

Criterion/indicator	Example	Comment
1 Number of attempts	Higher grades in Accounting are only available on first attempt. If standard met on second or later attempts, only 'competency achieved' grade is available.	It is clearly in interest of students and trainees to defer assessment until they believe they are ready. This discouragement of frivolous attempts also reduces pressure on teachers and lecturers.
2 Level of supervision	Level of supervision in the Australian defence organisation's Statement of Attainment form varies from *expert* (where no supervision is mentioned) to *skilled* (normal supervision), *trained* (close supervision) and *partially trained* (constant supervision).	It should also be noted that level of supervision is frequently used in the national industry standards to differentiate ASF levels. Critics of the grading process will sometimes claim that this criterion is, in fact, differentiating ASF levels not grades within a level.
3 Speed of performance	The ability to do things quickly (e.g. cook a meal) relates to industrial productivity in Tourism and Hospitality.	Many employers are interested in speed of performance as their profit margins are determined by the time taken to complete certain jobs.
4 Meeting deadlines	Grading in the Electrical industry case study is confined to theory modules (or theory sections of the modules) but not only must the learning outcomes be met but they must be met 'within the specified time'.	Meeting deadlines is similar to the 'speed of performance' criterion. However, in the cases cited one applies mainly to the workplace and the other to the classroom.
5 Consistency	Consistency of performance of most outcomes is a highly valued characteristic in industries such as Tourism and Hospitality.	Consistency is being introduced into new AVTS cooking assessment criteria. As a judgement about consistency requires repeated observation it will usually be appropriate to assess this in the workplace.
6 Accuracy	Among the examples provided by Edgecombe (1995) are Accounting grades given according to the number of errors made in calculations (e.g. Distinction = 0 errors, Credit = 1 error, Pass = no more than 3 errors).	Accuracy of performance is one of the easiest of criteria to devise and apply. Unfortunately it tends to be applied in an arbitrary fashion. Accuracy criterion should only be adopted after a period of trials and evaluation.
7 Profile (word picture, testimonial, reference)	The Australian defence organisation's Statement of Attainment form has provision for 'supervisors' to make a series of comments about the trainee such as recommendations for future postings, employment, future training or other developmental opportunities. Additional information gathered in this way goes under various other names, e.g. testimonials, references. Johnstone et al. (1995) provide an interesting discussion of the use of profiles.	Profiling provides valuable confirmatory evidence about the grade assignment process. The downside of profiling is the additional workload it places on teachers and trainers.
8 Complex traits: – artistry – creativity – flair – initiative – motivation – adaptability – efficiency	Complex human behaviours having to do with attitudes, values, interests and appreciation are frequently cited as important to the grading process. (For example, the artistic presentation of a plate of food or the creative ability to generate new ideas to solve a problem.) Furthermore, these complex traits are usually associated with grading at the higher ASF levels. This is why they have been separated from numbers 3–6 above.	Making judgements about complex traits of this sort is a challenge. Not only is it usually the province of experts, but also the experts themselves need some guidance to ensure their judgements are reliable.

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5 Conclusions and implications

Contrasts between training institutions and workplaces

At the present time in Australia there is a lack of agreement on whether graded competency-based assessment conforms with the national framework of CBT. An absence of national co-ordinating structures has resulted in the State and Territory TAFE systems and private training providers determining their positions according to individual interpretations of underlying principles. This report has gone some of the way towards explaining the reasons behind a number of current initiatives including the option of grading in competency-based assessment; most of these initiatives are being implemented away from the workplace. Employers are showing relatively little interest in grading their employees on the job. Many do, however, encourage grading by off-the-job providers of training.

There seem to be three possible explanations for this apparent inconsistency. It could be that employers are either reluctant or not yet able to devote the extra time and resources needed to provide grades. Another possibility is that grading in the workplace would have industrial relations implications: employers would want to avoid the possibility of having to pay extra wages for those workers with higher grades of workplace competence. A third possibility is that employers do not see levels of skills beyond 'competent' necessarily leading to better job performance. For example, having one member of a team doing a task faster than co-workers does not enhance the performance of the team if they are inter-dependent on each other. Employers are satisfied if the skills are of a standard that ensures a quality product. It could be that elements of all three of these explanations inform the employers' decision not to award grades.

On the other hand, employers know that the information about performance from training providers is based on a broad curriculum derived from general industry standards. This off-the-job performance is one step removed from workplace and productivity considerations. Therefore, in this case, they are happy to support grading because it provides information that can be used for other purposes, such as provision of awards and prizes or selection into special training programs or a new job classification.

One exception to the general approach of employers towards grading is to be found in the supervisory and managerial positions. Here we find another type of grading using a management by objectives or performance appraisal system approach.

Competition between public and private providers of training

Where public providers in a State or Territory do not provide grades there is a danger that they may be at a competitive disadvantage to private providers. If, as some private providers claim, they are responding to a genuine demand for grades, then we might soon see a movement from the public to private sector in some places.

Even if pressure can be brought to bear on the private providers not to grade when issuing nationally recognised qualifications, a problem might still exist. Private providers could offer clients a second qualification that did give the grades and hence retain their competitive edge.

Cost of grading

Representatives of training providers had given little consideration to the question of the cost of grading a competency-based assessment, presumably because decisions about the adoption of grading are grounded in the philosophical positions of the advocates and cost is not yet a consideration. It will be important to determine if a move to grading increases the overall assessment costs. If costs increase then this raises the question of whether the increases can be justified in terms of the benefits provided. It also means that resources and costs are likely to emerge as issues in the near future.

Quality of assessment instruments

Where grading is being implemented in Australia there appears to be a range of assessment approaches and conditions operating. Furthermore, the varied and diverse approaches to assessment are not always accompanied by guidance on appropriate strategies for curriculum developers, teachers and trainers. Of particular concern is the quality of the assessment instruments currently being used to arrive at grades. If, as some instances have shown, the quality of the instruments is inferior, then confidence in the assessment system will certainly diminish.

Some years ago Thomson and Pearce (1990) expressed reservations about the quality of the competency-based assessments being conducted both on and off the job. The assessment instruments examined during the course of this latest project indicate that problems still exist in this area. The analogy of 'building on a foundation of straw' comes to mind. There is a need to develop assessment exemplars to encourage improvement in existing procedures.

Alison Wolf, writing from a UK perspective, also believes that assessment exemplars are important. In addition, she emphasises the importance of developing networks for assessors to improve their skills and to monitor their reliability (Wolf 1993 p.29). These issues need to be examined more closely and further research undertaken.

Implications for the future

The primary concerns revealed in this report are associated with policy clarification, particularly in relation to the national framework of vocational education and training. Addressing only issues of process and best practice of graded assessment will not assist in the resolution of the policy issues.

Any policy change on grading needs to be based upon sound research and work in this project suggests that graded competency-based assessment needs to be compared with ungraded assessment to determine whether grading provides advantages such as:

- improved access to further education and employment
- an improved acquisition of knowledge, skills and attitudes for most students and trainees
- higher levels of productivity in the workplace.

Research into this aspect of competency-based assessment will be challenging and time-consuming but nevertheless fundamental to reaching a decision on the grading competency-based assessments. In the meantime, the following principles which will ensure a effective system of competency-based assessment should be endorsed while the evidence is gathered.

- A flexible system of competency-based assessment is preferable to an inflexible one.
- The greater the variety of information obtained when making an assessment the better *(although there comes a point when adding information ceases to have much impact on the assessment decision).*
- Current pilot studies in the use of graded competency-based assessment should be encouraged, provided they are thoroughly evaluated and the results reported. *(Guidance will*

be needed on ensuring a clear definition of the studies and in the framing of the evaluation questions.)

There exists a danger that a central authority may adopt a rigid stand which insists on a consistent approach—that is, everybody must grade or not grade. It will be important to look closely at the consequences of either of these positions. Undoubtedly the preferable way to proceed is to gather more evidence to determine the best course. Making a decision to defer attempts to achieve national consistency in assessment practice is a price we should be prepared to pay to reach this end.

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Appendices

Case studies

Interview schedule

Informants

Acronyms

Case studies

Case study is perhaps too grand a term for what follows. Most of the story about grading has been told in the main body of the report.

The purpose of these case studies is simply to provide examples of the different approaches to grading found in the course of the research.

Those wishing to have more information should consult the informants and/or documentation identified under 'Sources' at the end of each study.

Examples are provided from:

- The Australian defence organisation
- Accounting
- Tourism and hospitality
- Science laboratory technician course
- Electrical industry

Case study 1: The Australian defence organisation

Overview

This study compares the approaches to grading within the country's defence organisation.

The defence organisation consists of the Australian Defence Force (ADF) (the Navy, Army, Air Force and Headquarters ADF), and the Australian Public Service (APS) employees in the Department for Defence. These employees provide support to the ADF and the Minister for Defence. The department had some 200 trained assessors as of December 1995 and aims to have 1000 trained by mid-1997.

Defence is therefore one of the largest suppliers of training in Australia. Traditionally, training for each service and the APS was conducted by that service or the APS. Increasingly, however, the provision of training is being rationalised with larger amounts of training being provided for the total Defence organisation by one service, or the APS. More recently, moves have been made to contract out elements of the training.

The approaches to assessment and grading

There are interesting comparisons between the approaches of the Department of Defence and the Australian Defence Force (ADF).

Department of Defence

The APS elements of the Australian defence organisation are moving towards the implementation of competency-based training and assessment for all training provision other than management development for middle and senior managers. Competency-based assessment strategies, using assessment panels (minimum two members), involving assessors trained according to the national cross-industry assessor standards and drawn from the assessee's workplace, are being introduced for both diagnostic and summative assessment purposes. Wherever possible, these assessments are conducted within the context of nationally endorsed competency standards, including the APS enterprise standards. The links between the requirements of the workplace and assessment are, therefore, established. The implementation of competency-based training and assessment has also provided the opportunity to develop formal processes for ensuring that training remains current

and relevant to workplace requirements. The use of grades in assessment is not considered appropriate. Defence APS use the common 'Defence Statement of Attainment' for the recording of competencies awarded either through formal recognition processes (diagnostic assessments) or as a result of training, on-the-job experience and subsequent competency-based assessment (summative assessment).

Australian Defence Forces

In the ADF, the actual assessment of competency has not presented significant difficulties. Assessment occurs both in training (by trainers), and in the workplace (by trade testing officers). Assessors (trainers or trade testing officers) are normally chosen because of their acknowledged competence in their own work stream. Assessors must meet criteria determined by the training advisor or training sponsor. They are also guided by service assessment policies and receive basic training in assessment as part of their training. Therefore, relatively high degrees of validity and reliability of assessment have been achieved.

Statement of Attainment

While there has been some pressure to adopt grading in the Department of Defence, achievements in training programs are presently ungraded. Ungraded assessments are also frequently used in the Defence Forces but here there is also an option to provide grades. A 'Statement of Attainment' provides additional information; a version is used in both Defence and the Defence Forces.

1 **Training level**—describing the degree of proficiency reached by the trainee at one of four levels.

- (E) Expert
  Can perform task quickly; can tell others how to do the task; can cope with difficult and unusual problems.
- (S) Skilled
  Normal supervision required, can cope with common problems; can apply skills and associated knowledge to new situations with confidence.
- (T) Trained
  Close supervision required, demonstrates awareness of common problems; applies skills and associated knowledge to new situations with limited confidence.
- (P) Partially
  Constant supervision required, can perform some of the component skills; can describe the task.

2 **Word picture**—which provides a series of comments about the trainee such as recommendations for future postings, employment, future training or other developmental opportunities.

The Statement of Attainment form also has a provision for the recording of training time where this is relevant to the learning outcome in question.

Sources

- Lieutenant Commander Ian Maddock, RAN, Department of Defence, ACT
- Ken Jorgensen, Department of Defence, ACT

Case study 2: Accounting

Overview

This study looks at developments in the assessment of the National Accounting modules. During 1992–93 the National Accounting Project developed a curriculum in competency-based format, for a complete suite of accounting modules to Associate Diploma level. Early in 1993, with assessment emerging as a key issue, a discussion paper on competency-based assessment was commissioned to help guide the deliberations of the project team. The grading question was a particularly critical one for the team. The suggestion to the project team was that:

> *There will be no form of graded assessment for the national accounting modules. Learners will be assessed as either competent or not yet competent. Higher achieving learners should be encouraged to achieve learning outcomes from more advanced modules or have merit awarded to them on the basis of (for example) flair and the ability to transfer skills to new situations easily.*
>
> (Gibb 1993 p.16)

This proved too radical for some and the compromise in the Accounting national curriculum documents reads:

> ***Grading***
> *Pending a statement of national policy on graded assessment, learners will be assessed as either 'competent' or 'not yet competent' on all the assessment criteria for this module. The assessor may issue a merit grading based on additional criteria.*
>
> (ACTRAC Products Ltd 1994)

Informants from public and private training institutions stressed that many of their students have aspirations to continue study at university. Their use of grades was largely influenced by this fact as some universities would not consider students without grades.

The approaches to assessment and grading

In this section we will consider the approaches to assessment and gradings in accounting in two States—Victoria and South Australia.

Victoria

Earlier this year an evaluation was made of the implementation of the Associate Diploma of Business (Accounting) course in eight TAFE colleges in Victoria (Rea & McDougal 1995). Among other things the evaluation:

> *. . . showed the various approaches by colleges to how a CBT program is to be delivered in terms of recording results and assessing learning outcomes or assessing students as competent. No two colleges appear to be using the same approach.* (p.15)

Variations in approaches to assessment are part and parcel of being Victorian. Victoria's devolved system is in sharp contrast to the more centralised systems of New South Wales and Queensland. The Victorians see their system as ensuring greater ownership of assessment at the local level.

The grades offered by one college were:

Not yet competent:	0 – 60%
Competent:	
PASS	60 – 74%
CREDIT	75 – 84%
DISTINCTION	85 – 94%
HIGH DISTINCTION	95 – 100%

The scores, which are converted to grades as shown above, can be derived from a wide variety of assessments—essays, short answer tests, assignments, group work, observations, etc.

If an assessment was unsuccessful (all learning outcomes must be deemed competent for 'success') the student could re-sit the assessment. However, only one 're-sit' is allowed. Furthermore, a student is only awarded a pass level of competency in a re-sit (that is 60 per cent) irrespective of their result.

Failure in the re-sit means the student must re-enrol and repeat the learning outcomes not completed successfully.

Re-sits proved to be a problem in a number of colleges. One college reported that it had had to abandon a policy which allowed multiple re-sits because students were abusing the system. With a limited number of tests available, students were able to discover the set of possible questions and prepare answers accordingly.

The authors of the evaluation report had investigated the introduction of graded assessments by South Australia's DETAFE (see below) and suggested this procedure should be an option for designers of CBT courses in Victoria.

South Australia

At the beginning of 1995 there was an urgent request from South Australian TAFE accounting lecturers for direction on grading results. This led to the formation of a small team under the direction of Ray Edgecombe at Para Institute of TAFE which produced five exemplars for circulation among the TAFE colleges. In reporting on this pilot, Edgecombe (1995) noted that each

exemplar had a different approach to grading. However, the five authors had:

> *. . . been careful not to add to the curriculum in seeking discriminators but to prescribe additional assessment indicators, within the module's curriculum that would serve as a means of grading.* (p.5)

These 'additional assessment indicators' include such things as:

- ability to express ideas
- evidence of wider reading (with a recognised referencing system such as Harvard being used)
- logical presentation of ideas
- appropriate presentation of work (e.g. report format)

An example of a graded assessment from the module on *Business planning and control* shows how this was achieved. This assessment covers only two of eight learning outcomes and involves scoring unsupervised written essays or short answers prepared by the students for a particular task. Higher grades are only available on the first submission of answers.

The discriminators used by the lecturers when assigning grades in this particular assessment were:

Distinction

- Student's original ideas showing greater insight into topics discussed should lead logically to their conclusions. Answers should be close to required length with all key points covered.
- Student is clearly able to show evidence of judgement in applying the theory to the topic.
- Clear evidence of wider reading through sources referenced in answer and Harvard reference system correctly used; a bibliography with each answer.
- Very high standard of presentation.
- Work submitted by due date (unless prior arrangement made with lecturer).

Credit

- Student's original ideas should lead logically to their conclusions. Answers should be close to required length with all key points covered.
- Student is able to apply the theory to the topic.
- Evidence of wider reading through sources referenced in answer and Harvard reference system correctly used; bibliography with each answer.
- High standard of presentation.
- Work submitted by due date (unless prior arrangement made with lecturer).

Competency achieved

- Student's ideas should lead logically to their conclusions. Answers may deviate from required length.
- Student is able to apply the theory to the topic but not to the extent required for a higher grade.
- Harvard reference system correctly used, but less evidence of wider reading than that required for a higher grade; a bibliography with each answer.
- Acceptable standard of presentation.
- Work submitted by due date (unless prior arrangement made with lecturer).
- Some resubmission may be required for (part) answers not competent.

Note: Work submitted late without prior arrangement with lecturer will not be given a higher grading than *competency achieved.*

Competency failed

- Ideas not expressed in student's own words i.e. plagiarism and student is unable to resubmit an acceptable answer, or a student has copied another student's answer.
- Answers are inappropriate and student is unable to resubmit an acceptable answer.

The Accounting Sub-program Group (Edgecombe 1995) has also established a set of rules whereby the grades received on individual assessments are converted to a final grade on the module. There are also guidelines provided on the contentious issues of using marks.

> *Marks are not appropriate for CBT assessment because all learning outcomes/assessment criteria have equal weighting. Marks are difficult to allocate because to be useful in CBT assessment they need to differentiate between types of errors—it is easier to specify particular errors/deficiencies which detract from competency or which indicate a level of skills (distinction, credit or CA) at the 'first attempt'. Allocation of marks and marking CBT assessments using marks is more time-consuming than establishing whether a student has met all the assessment criteria or made a number of errors or been deficient.* (p.10)

Sources

- ACTRAC Products Ltd 1994, *National Accounting Modules*, Melbourne.
- Edgecombe, R 1995, *Proposals for grading results in five accounting modules*, Accounting Sub-program Group, Department of Employment, Training and Further Education South Australia, Adelaide.
- Gibb, J 1993, *Assessment in a competency-based approach to training*, Adelaide, NCVER.
- Rea, C & McDougal, L 1995, *Evaluation of the Associate Diploma of Business (Accounting)*, Barton Institute of TAFE, Victoria.
- Cherry Rea, Barton Institute of TAFE, Victoria
- Alan Daniel, Barton College of TAFE, Victoria
- Angela Beard, Outer Eastern College of TAFE, Victoria
- Tim Campbell, Torrens Valley Institute of TAFE, South Australia
- Ray Edgecombe, Para Institute of TAFE, South Australia

Case study 3: Tourism and hospitality

Overview

Tourism Training Australia (TTA) is recognised by government and industry as the peak advisory body for vocational education and training in the hospitality and tourism industry. It is the organisation responsible for co-ordinating much of the hospitality training system, including ACCESS (skills recognition), the Australian Hospitality Review Panel (AHRP) (industry recognition of training) and is jointly responsible for promoting the Cook's Recognition System (trade recognition as a qualified cook).

TTA is overseeing the revision of the national modules for the hospitality industry (known as *The black book*). The revised modules allow for the use of graded assessment. (National competencies for tourism and travel are currently being written.)

Tourism Training Australia was one of the first developers of competency standards and has also been a leader in providing an assessment system to support the standards. In the next section an outline is given of how grading is being used (or planned to be used) by providers in three States.

The approaches to assessment and grading

William Angliss College

William Angliss College in Melbourne is a public provider of training in the field of tourism and hospitality. An internal college paper points out that the new national curricula being introduced to tourism and hospitality courses provides an opportunity to introduce 'ranking outcomes' or 'ranking assessment criteria'.

It also notes that some of the impetus for this 'ranking' comes from the requirements of universities.

The paper identifies a number of approaches the college is currently considering in conjunction with Tourism Training Victoria and relevant industry peak bodies. These are:

1 Use of additional criteria (i.e. additional to those in existing curriculum). These could include such things as:

- punctuality
- attitude
- personal presentation
- assignment presentation

- artistic skills
- originality.

2 Use additional learning outcomes (which would be distinguished as the outcomes for grading) and include:

- extra competencies
- competence at a higher level
- faster performance and therefore more industrially productive.

3 Create classifications of assessment criteria as:

- essential
- useful to know
- required for excellence.

(Students would be required to meet all essential criteria to be competent and grading would be based on the number of the other criteria achieved.)

NSW Tourism and Hospitality Training Division

The NSW Tourism and Hospitality Training Division has developed a system for grading work also based on additional criteria (similar to the first of the William Angliss approaches). In addition, the consistency and degree to which the additional criteria are met are used in making judgements about grades. The following example indicates how this works.

Sample

This module is graded. The module results are reported as A, B, C, FAIL.

GRADE	CLASS MARK %
A	> 83
B	> 70
C	> 50
All other cases FAIL	

Assessment event results

Some assessments may be marked numerically. Some assessments may be graded holistically, in which case the following additional criteria will be applied and later converted to a numeric value depending on the weighting of assessment.

A	Student **meets criteria** for learning outcomes being assessed and in addition, **consistently meets most** of the following criteria to **far exceed** minimum requirements: • Depth and scope of underpinning knowledge • Understanding and application of theoretical principles • Critical and creative thinking • Efficiency in approach to achieving learning outcomes • Accuracy/attention to detail • Problem solving/contingency management • Task management/organising work • Adapting to work culture (punctuality, courtesy, and uniform standards where appropriate, presentation of work) • Team work (co-ordinating and co-operating with others) • Adherence to OH&S guidelines • Other criteria given by the assessor in providing assessment feedback
B	Student **meets criteria** for learning outcomes being assessed and in addition, meets **some** of the following criteria to exceed minimum requirements: • Depth and scope of underpinning knowledge • Understanding and application of theoretical principles • Critical and creative thinking • Efficiency in approach in achieving learning outcomes • Accuracy/attention to detail • Problem solving/contingency management • Task management/organising work • Adapting to work culture (punctuality, courtesy, and uniform standards where appropriate, presentation of work) • Team work (co-ordinating and co-operating with others) • Adherence to OH&S guidelines • Other criteria given by the assessor in providing assessment feedback
C	Student **meets criteria** for learning outcomes being assessed. These criteria are listed with each of the learning outcomes. In all modules students should demonstrate general industry practices identified by the Hospitality Industry ITAB, Tourism Training Australia of: courtesy, efficiency, workplace ethics and adherence to health and safety regulations.
FAIL	Student **does not meet criteria** for learning outcomes being assessed. Student does not demonstrate general industry practices relating to courtesy, efficiency, and adherence to health and safety regulations.

Lorraine Martin Commercial College

The Lorraine Martin Commercial College in Queensland is a major private provider college which also offers courses in travel and tourism (from certificate to advanced diploma). The approach of colleges in the private sector is different to that in the public. As the college principal (Martin 1995) notes:

> *We are totally client oriented. We sink or swim on whether our clients gain employment. The delivery of excellent service, an awareness of the market forces and a total commitment to producing employable outcomes have fuelled competition within the private sector.*

Assessment grades are provided against 0 – 100 marking schedules.

HIGH DISTINCTION	95+
DISTINCTION	75 – 94
CREDIT	65 – 74
PASS	50 – 65

'FAIL' grade is not used, the college uses the term 'STUDIES UNDERTAKEN' when scores do not reach 50 per cent.

In line with the college philosophy on assessment, written reports about students' qualities and characteristics are also provided in addition to the grade.

Sources

- Viv Caulfield, Lorraine Martin Commercial College, Queensland
- Martin L 1995, 'The role of the private provider in a national system of vocational education and training', ANTA conference proceedings, *Towards a skilled Australia*, Melbourne.
- Sam McCurdy, William Angliss College of TAFE, Victoria.
- Gail McRae, Tourism and Hospitality Training Division, NSW TAFE Commission.

Case study 4: Science laboratory technicians

Overview

Staff at the Canberra Institute of Technology (CIT) have been in the forefront of the debate on graded competency-based assessment. Clayton (1995) describes two examples of graded assessment developed by staff members of CIT. She also notes staff concerns within institutional settings:

> *. . . about recognising those instances where learners attain standards beyond those required by the standard assessment criteria. This concern, to a large extent, is a response to the pressure being applied by learners to have their levels of achievement in courses acknowledged when their results are reported by training organisations. For many learners, academic records which simply indicate that they have performed at a 'pass' or 'satisfactory' level do not truly reflect their educational achievement.*
>
> *Others, such as employers and higher education administrators are concerned too that an ungraded system of reporting results gives them little guidance on the merit of learners' performance in courses.* (p.168)

Ivan Johnstone, head of the Department of Physics at CIT and national co-ordinator for the Science Laboratory Technicians course, argues that grading should *not* be applied:

> *. . . to fundamental knowledge and skills modules where it is difficult to distinguish between entry skills and those acquired during the module and since significant reinforcement is possible in later modules.*
>
> (Johnstone 1994, p.39)

Johnstone believes it is more appropriate to apply grading towards the end of a course where the information provided is most useful to employers and the higher education system. To this end the approach CIT has adopted involves an integrated assessment bringing together the outcomes of a number of modules. This is undertaken towards the end of the course. One example is a practical project which requires learners to apply and integrate their skills in the solution of a (simulated) workplace problem. 'Graded' assessment for this module involves an holistic assessment of excellence in such factors as efficiency, independence, innovation, adaptability, and self-management at performance levels beyond those appropriate for entry-level technical officers. (See p.45)

Advanced level techniques or instrumentation-based modules have also been chosen for graded assessment within any course of study. Using this approach, graded assessment would be suitable for a

number of modules in any course and represents a balance between applying merit assessment throughout an entire course of study and relying on a single merit assessment.

The approaches to assessment and grading

The example which follows provides for two pass levels, 'pass' and 'pass with merit'. The advice of teachers, trainers and industry experts was sought to help identify what constituted 'merit'. The additional criteria have therefore come from the professional judgement of experts. These additional criteria, however, still directly relate to the learning outcomes of the modules.

Example: Science Laboratory Technician

MODULE TITLE:	**PRACTICAL PROJECT**
Module purpose	The purpose of this module is to develop the learner's ability to apply their knowledge and skills in an unfamiliar situation through the design, execution and documentation of a measurement-based project.
Learning outcomes	On completion of this module the learner will be able to: • Prepare a feasible project plan in consultation with a nominated supervisor. • Refine the project parameters as a result of background research and/or evaluation of trial procedures or prototypes. • Execute the project plan and analyse the outcomes. • Communicate the project's progress and outcomes to a nominated audience.
Module completion requirements: Pass level	An holistic guide for assessing a learner's project at the pass level is given below. To successfully complete a practical project the learner **must**: • achieve all module learning outcomes (1–4); • meet all obligations agreed to in the learning contract (e.g. timetable); **and** • in the supervisor's professional judgement, be capable of performing technical work at a level appropriate for a technical officer at the end of entry-level training. Indicators of this would be: • **technical expertise** e.g: – performs tests and measurements using defined procedures and obtains accurate and reproducible results – undertakes routine operation, calibration and minor maintenance of instruments and equipment – records and validates data; provides accurate analysis, interpretation and/or conclusions; and documents outcomes. • **degree of assistance and/or supervision** e.g: – work is subject to periodic progress checks – assistance is sought when problems are encountered – supervision required is typically 10–20 per cent of the nominal duration of the module.

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Module completion requirements: Merit level (optional)	Merit is defined as the learner's skills being in excess of what could generally be expected of an entry-level technical officer. The academic complexity of the project undertaken is not considered as a basis for awarding merit on equity grounds. Where institutions wish to adopt graded assessment for this module an holistic **guide** for assessing a learner's project at the merit level is given below. To successfully complete a practical project with merit the learner **must**: • achieve all criteria listed for the pass level of achievement; **and** • in the supervisor's professional judgement be capable of performing technical work at a level above that expected of a technical officer at the end of entry-level training. Indicators of this would be: • **efficiency** e.g: – plans tasks effectively to achieve project outcomes with minimal use of time and materials • **independence** e.g: – works with infrequent progress checks – works with limited supervision, typically five per cent of the module's nominal duration – persists with, and solves, difficult tasks and problems. • **innovation** e.g: – generates original ideas – when assistance is sought, defines problems clearly and suggests well thought-out ideas and alternatives • **adaptability** e.g: – modifies approach in response to new information or unforeseen circumstances • **self-management** e.g: – sets achievable goals and monitors own progress. It is left to the supervisor to specify whether some, or all, of these criteria will be required for merit and whether they form part of the learning contract.

Sources

- Clayton, B 1995, *Focussing on assessment*, Adelaide, NCVER.
- Johnstone, I 1994, 'Graded CBT assessment', *Australian Training Review*, no.9.
- Johnstone, I, Williams, M & Robinson, R 1995, *Scitech users' manual*, draft, ACTRAC Products Ltd, Melbourne.

Case study 5: Electrical industry

Overview

The use of grading in the electrical industry is of particular interest. The electrical and electronic trade is traditionally one trade for which industry standards have been developed. Furthermore, the sector shares many of these standards with the metals industry which, for the most part, has rejected the use of graded assessment. Interviews in both New South Wales and South Australia revealed that people across the electrical industry were requesting graded assessments. Both States have been experimenting with ways of providing grades.

In this case study we will look at the process that has evolved in South Australia. In that State, the first initiative in grading used the number of attempts that students required to achieve competency on a learning outcome. If a student achieved competency in all learning outcomes in a module at the first attempt, a distinction grade was awarded. If a student achieved competency in fewer attempts than twice the number of learning outcomes, without exceeding three attempts at any learning outcome, then a credit grade was given. If competency was achieved in all learning outcomes in less than three times the number of learning outcomes then a pass grade was given.

This system resulted in a large number of students gaining distinction grades which was seen as devaluing 'distinctions'. Students also complained because there appeared to be little differentiation between those who achieve all learning outcomes at a marginal level and those who produce near-perfect scores. The SA Electrical and Electronics Industry Training Advisory Board therefore decided to replace this system with a new one in 1995.

The approaches to assessment and grading

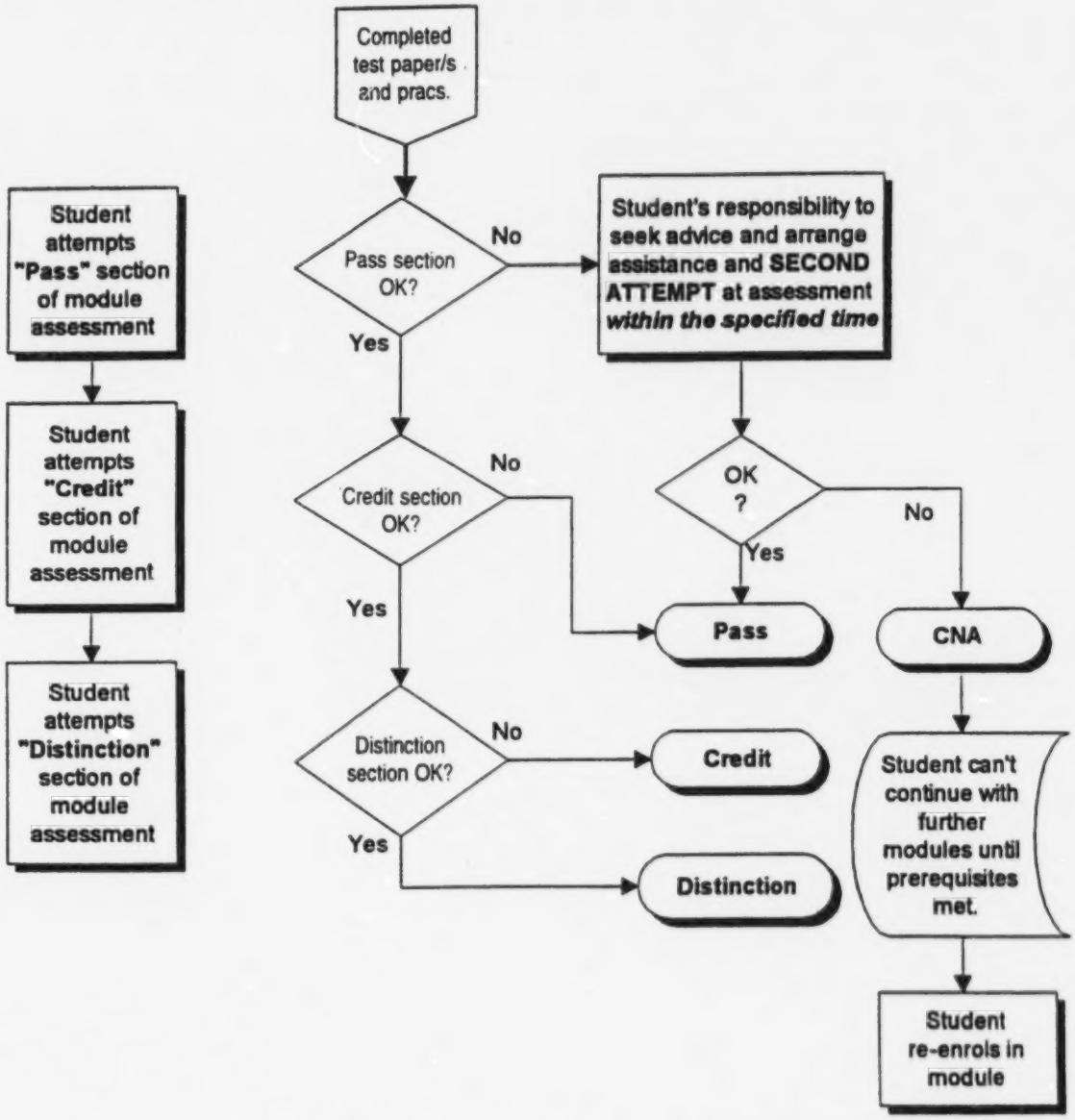
The new system uses different approaches according to the type of module. Modules that are assessed entirely through the demonstration of practical competency have a single 'passing' grade of CA (competency achieved). The use of merit and distinction grades is confined to modules which involve some theory assessment.

In order to achieve grades above the prescribed competency standard, a student is given the opportunity to attempt additional exercises that examine information beyond the basic requirements of the module. (The basic or 'pass' standard involves meeting all

learning outcome requirements *and* meeting all deadlines for set work.) This additional work may be provided on a learning outcome-by-outcome basis or may be in the form of a composite question(s) which combines learning outcomes in order to establish the students' understanding of holistic concepts.

The following flow chart outlines how the procedure works.

Grading process for theory and theory/practical modules



Adapted from SA EEITB 1995

Sources

- Vern Berry, Electrical and Electronics Industry Training Advisory Board, South Australia
- Stephen Conway, Regency Institute of TAFE, South Australia.

Interview schedule

The following is a condensed version of the questions and data-gathering activities associated with the case studies and structured interviews.

1 Policy

1.1 Documentation

Interviewer to ask for copies of policy the authority/institute/company has developed on assessing/reporting/using levels of performance in competency-based VET.

If policy documentation is non-existent or incomplete, interviewer to ask for the reasons this is the case.

Interviewer to note that it may be necessary to conduct a follow-up interview after the documentation has been read (for example, it may be necessary to clarify if the policy is being applied across all VET programs).

1.2 Questions

1.2.1 Who/which group was responsible for the development of your policy?
(What was the background to moving in this direction?)

1.2.2 How did they go about this task?
(Probe for information on who was consulted)

1.2.3 Who ensures the policy is being implemented?

1.2.4 Is there any on-going monitoring/evaluation of the implementation, and if so, by whom?

1.2.5 Does the policy cover:
- all CBT programs?
  (if not all, get estimate of percentage)
- all ASF levels?
  (if not all, which ones?)
- assessing, reporting and using?
  (if not all three, which ones?)

1.2.6 Are there likely to be changes to the policy in the future and what will these changes be?

1.2.7 Is the policy specific to the off- or on-the-job VET or is it integrated?

1.2.8 How do successful trainees/students get certificated? For example, are there separate certificates for off-the-job performance and on-job performance?

1.2.9 Is grading applied to both the off-the-job and on-the-job performance?

1.2.10 Do you agree or disagree with the view that the NTB's existing competency standards statements do not allow levels of performance to be identified for units of competence?
(If disagree: Probe for reasons)
(If agree: Does this mean a policy on providing information on levels of performance will require changes to competency standards?)

1.2.11 There is evidence to suggest that different States and Territories are adopting different policies towards assessing levels of performance. In other words, there is a lack of national consistency. How do you feel about this? Should everybody be required to follow the same approach, whatever that is?

1.2.12 If everybody agreed that there should be a national policy on whether or not we assess level of performance other than competent/not yet competent, who should set the policy?

1.2.13 If you were asked to nominate the strongest argument **in favour of** assessing levels of performance in CBT, what would it be?

1.2.14 Conversely, what do you see as the strongest argument against?

1.2.15 *(To be asked if not covered above)*
Assume that the assessment of a group of individuals against a set of standards has been done correctly, and all are judged to be 'competent'. Does 'competent' in such a situation mean they can all perform to the standards equally well? That is, there is no difference among the group as far as performance on the set of standards is concerned?

1.2.16 Do you have a policy on retesting to enable students/trainees to improve their grade?
(If yes, obtain details)

1.2.17 Are you confident that different assessors will be able to reach the same judgements about individual grades (i.e. reliability of grading process)?

1.2.18 Are there any other matters related to grading policy that you would like to bring to our attention?

2 Implementation

2.1 Documentation

Interviewer to obtain written statements on implementation procedures, if possible. Any discrepancies between policy and implementation procedures to be followed up.

Also ask for documentation which shows how competency standards (units, elements etc.) have been turned into training programs with learning outcomes, assessment criteria etc. If this is not available, get explanation of how it is done.

2.2 Questions

Note: extent of implementation may have partly been covered by answers to Q 1.2.5.

2.2.1 Is the assessment of levels of performance within units of competency or learning modules done for:
- all CBT programs
  (if not, get percentage)
- all ASF levels
  (if not, which ones?)

2.2.2 Is the reporting of levels of performance based on:
- assessment of workplace competency standards only?
- assessment of training modules learning outcomes only?
- a combination of both the above?
  (what combination? [e.g. 50:50?])

2.2.3 Who uses the information about levels of performance?
(e.g. merit/distinction)
2.2.4 What do they do with this information? How is it used?
2.2.5 Who decides whether or not to use graded assessment other than competent/not yet competent:
- teachers/lecturers/trainers?
- college administrators/company managers?
- system bureaucrats/ITABs?
- other (specify)

2.2.6 When carrying out the grading, is the same system used across all ASF levels? If not, how does it vary?
2.2.7 Are there any other matters related to the implementation of grading that you would like to bring to our attention?

3 Users/practitioners

3.1 Documentation

Interviewer to obtain samples of the certificates/forms used to report levels of performance. If not available, get explanation of the criteria used in grading.

Ask for copies of any reports, evaluations etc. that are relevant.

3.2 Questions

3.2.1 Do students/trainees have an option as to whether their performances are graded or simply given competent/not competent rating?
3.2.2 Is the grading information provided in a suitable form? If not, how should it be improved?
3.2.3 Do you believe the information provided by the grading process is superior to what was available before CBT was adopted? What reasons do you have for saying that?
3.2.4 Is 'competent' on a training course the same as 'competent' in the workplace? What reasons do you have for saying that?
3.2.5 Do you have any problems distinguishing levels of performance when assessing? If yes, what are these?
3.2.6 Do you believe that students/trainees, in general, want grades? What reasons do you have for saying that?
3.2.7 Do you believe that teachers/trainers, in general, want grades? What reasons do you have for saying that?
3.2.8 Do you believe that employers, in general, want grades? What reasons do you have for saying that?
3.2.9 Is there any information other than grades that you would like to see reported? If yes, what is that?
3.2.10 Do you allow students/trainees to retest to improve their grades?
(If yes, obtain details e.g. how long between tests)
3.2.11 Do you think the existence of grades makes students/trainees work harder?
(Probe for details)
3.2.12 Are there any other matters related to the use of graded criterion-referenced assessment that you would like to bring to our attention?

Informants

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Acronyms

ACTRAC	Australian Committee for Training and Curriculum
AEC	Australian Education Council
AGPS	Australian Government Publishing Service
ASF	Australian Standards Framework
CBT	Competency-based training
DEET	Department of Employment, Education and Training
DETAFE	Department of Employment and Technical and Further Education, SA
DIRETAFE	Department of Industrial Relations, Employment and Technical and Further Education
ITAB	Industry Training Advisory Body
NCVER	National Centre for Vocational Education Research Ltd
NFROT	National Framework for the Recognition of Training
NOSFAB	National Office Skills Formation Advisory Board
NTB	National Training Board
OTFE	Office of Training and Further Education
SCC	Standards and Curriculum Council
TAFE	Technical and Further Education/Training and Further Education
VEETAC	Vocational Education, Employment and Training Advisory Committee